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EXAMINER

KOYAMA, KUMIKO C

ART UNIT PAPER NUMBER

2876

DATE MAILED: 07/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918.035

Applicant(s)

PURPURA ET AL

Examiner

Kumiko C. Koyama

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 11-19 and 21-24 is/are allowed.
- 6) ☐ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) 20 and 25-35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

DETAILED ACTION

Acknowledgement is made of receipt of Amendment filed on April 21, 2003.

Claim Objections

1. Claims 20 and 25 are objected to because of the following informalities:

Re claim 20, line 2: "DC" should be changed to --direct current--.

Re claim 25, line 7: "DC" should be changed to --direct current (DC)--.

The examiner notes that the specification should also be change accordingly. The examiner suggests the following.

Page 1, Paragraph [003], line 10: "DC" should be changed to --direct current (DC)--.

Page 1, Paragraph [003], line 11: "AC" should be changed to --alternating current (AC)--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States

3. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Dolash et al (US 4,983,817).

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Dolash teaches a background compensating bar code reader that detects a fluorescent light signal 10 serving as the detect signal by receiving light reflected from the target and a reflected excitation light signal 11 serving as signal for the generating of the baseline signal (col 5, lines 28-37). The reflected excitation light signal 11 converts into a voltage signal 21, and voltage signal 21 is converted into voltage signal 31 (col 7, lines 7-15). Such conversion serves as generating a baseline signal. The fluorescent light signal 10 is converted into voltage signal 18 (col 7, lines 1-7), which serves as generating a detected signal. Dolash further teaches that a subtraction device could be used to subtract one voltage signal 31 from the other voltage 18 and the resultant differential voltage would be constant and independent of background reflectance under the fluorescent bars (col 7, lines 60-65).

Re claim 2: Dolash teaches that the invention is for reading a fluorescent bar code (col 4, lines 66+).

Re claim 4: Dolash teaches that the excitation light source means 3 comprises a conventional helium-neon laser (col 5, lines 10-11).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Dolash in view

of U.S. Pat. 5,672,317. The teachings of Dolash have been discussed above

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Dolash fails to teach that the target comprises a sample vessel.

Buhler et al teaches a sample vessel 11 with a bar code label 48 (Fig 5).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Dolash to the teachings of Buhler because a bar code label is capable to identifying the contents, tests that have been/being performed, results of the sample vessel in a fast and easy manner. Furthermore, such modification would further prevent the sample vessel from getting lost within the lab facility.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dolash in view of Blanford (US 4,868,375). The teachings of Dolash have been discussed above.

Dolash fails to teach that the transmitting a laser beam at the target comprises transmitting a red laser beam at the target.

Blanford teaches a bar code reader 20 having a light source 32 producing a continuous laser beam of red monochromatic light (col 3 lines 26-29).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Blanford to the teachings of Dolash in order to indicate where the bar code reader is emitting light towards, which helps the user to aim the reader's light source to the precise location of the bar code, therefore obtaining the correct bar code information/reading in a timely manner.

7. Claim 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Dolash in view of Belser (US 5,892,745). The teachings of Dolash have been discussed above.

Dolash fails to teach the subtracting step comprises inverting the baseline signal and summing the detected and inverted baseline signals.

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Belser teaches subtracting MO+ and MO- signals using an inverting amplifier and a summing amplifier (col 2 lines 41-44).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Belser to the teachings of Dolash because an inverting amplifier and an summing amplifier are well known operational amplifiers that are cheap and easy to use, which leads to a more simple and compact product.

8. Claim 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolash as modified by Belser as applied to claim 6 above, and further in view of Nagata (US 5,898,738). The teachings of Dolash as modified by Belser have been discussed above.

Dolash as modified by Belser fail to teach passing the detected signal through a first resistor and the inverted baseline signal through a second resistor before the summing where the ratio of the first resistor to the second resistor comprises the ratio 1:3.

Nagata teaches a first resistor with its one end connected to the logic sum circuit and the other end connected to an operational amplifier, and a second resistor with its one end connected to the logic sum circuit. Nagata further teaches that the first and second resistors have their resistance values set to be 1:3 ratio.

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Nagata to the teachings of Dolash as modified by Belser in order to adjust the signal amplitude to a value that the summing amplifier is capable to handling, which prevents the amplifier from being damaged or perform wrong operations.

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9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dolash as modified by Belser and Nagata as applied to claim 8 above, and further in view of Endo (US 5,258,749). The teachings of Dolash as modified by Belser and Nagata have been discussed above.

Dolash teaches that the signal 11 is converted to voltage signal 21 through a transimpedance amplifier 20 (col 7, lines 7-9).

However, Dolash as modified by Belser and Nagata fail to teach amplifying the baseline signal by a factor of three before the inverting.

Endo teaches a signal passing through an amplifier 8 and amplifying the level to three time (col 3 lines 25-28).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Endo to the teachings of Dolash as modified by Belser and Nagata and amplify the baseline signal, which is generated by receiving reflected light off of the background, by a factor of three in order to adjust the signal amplitude to a value that the inverting amplifier is capable to handling, which prevents the inverting amplifier from being damaged or perform wrong operations.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson (US 4,806,741). The teachings of Dolash have been discussed above.

Dolash fails to teach a method comprising generating a scan synchronization signal immediately before transmitting the light scan, and generating the baseline signal immediately after generating the scan synchronization signal.

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Robertson teaches a line scan synchronization signals, which comprise steps of generating a time sequence of pulsed signals (col 3 lines 63-65).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Robertson to the teachings of Dolash in order to enhance signals read and improve the readability of defective formed or damaged bar codes.

Response to Arguments

11. Applicant's arguments, see Page 8, lines 5+, filed April 21, 2003, with respect to the rejection(s) of claim(s) 1-10 under Marwin in view of Narabu have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Dolash.

Allowable Subject Matter

12. Claims 11-19 and 21-24 are allowed.

13. Claims 20 and 25-35 are objected to due to minor informalities. Please see above for details.

14. The following is a statement of reasons for the indication of allowable subject matter: The best prior art of record, Marwin, Sherer, Takenaka, Harr taken alone or in combination fail to teach a coupling circuit comprising a sample signal generator, the sample signal generator comprising an input and output, the sample signal generator input receiving a sample timing signal, a sample-and-hold circuit, the sample-and-hold comprising an input, an output, and a

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sample trigger, the sample-and-hold input receiving the scan detector output signal, the sample trigger operatively coupled to the sample signal generator output, and a voltage amplifier, the amplifier comprising an input and an output, the amplifier input operatively coupled to the sample-and-hold output, the amplifier output operatively coupled to the sample-and-hold input.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McMillin, U.S. Patent No. 3,820,068, discloses a background reference level system and method for document scanners.

Drucker, U.S. Patent No. 4,818,886, discloses a method and apparatus for self-referencing and self-focusing a bar-code reader.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kumiko C. Koyama whose telephone number is 703-305-5425. The examiner can normally be reached on Monday-Friday 7am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 703-305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

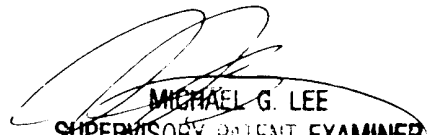
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

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Kumiko C. Koyama

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June 30, 2003


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